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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,303	06/16/2005	Richard Corbett	09728.0330USWO	2664

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P.O. BOX 2903
MINNEAPOLIS, MN 55402-0903

EXAMINER

KING, BRADLEY T

ART UNIT	PAPER NUMBER
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3683

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/16/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/539,303

Applicant(s)

CORBETT ET AL.

Examiner

Bradley T. King

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>6-05</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the sensor means of claim 8 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New

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Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 8 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 8 requires a "sensor means for controlling the switching of the brushless motor". The sensor means has not been sufficiently described in the disclosure to enable one skilled in the art to make and/or use the device or appreciate what is encompassed by the recitations. Claim 8 has not been treated with regards to prior art.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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Claims 8 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 8 recites "sensor means for controlling the switching of the brushless motor". The disclosure fails to disclose any specific sensor means or corresponding structure. As the means and its equivalents can be identified, the recitation renders the claim indefinite.

Claim 10 recites "portion meshing with a gear fast for rotation". It is not clear what the recitation is intended to convey, particularly the "fast" portion.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 4 and 9-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Rieth et al (US# 6405836).

Rieth et al discloses all the limitations of the instant claims including; an electric motor 11 with a stator 9 and a rotor 10, a screw mechanism 2, including a rotatable nut 16 and a central screw 17 translatable along a given axis, a planetary gear reduction system 3, disposed between the rotor 10 and the screw mechanism 2, for driving this mechanism, wherein the rotor 10 carries a plurality of satellite gears 31-32 of the

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reduction system 3. Note that the satellites are rotatably "carried" by the integral sun gear portion of the rotor.

Regarding claim 2, note toothed rim 37.

Regarding claim 4, note figures 1 or 2.

Regarding claim 9, note locking member 38.

Regarding claim 10, note stepped pinions 31-32 which mesh with fixed gear 33 and gear 30.

Claims 1 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by et al Shirai et al (US# 6138801).

Shirai et al discloses all the limitations of the instant claims including; an electric motor with a stator 110 and a rotor (48, 112, 178), a screw mechanism, including a rotatable nut 54 and a central screw 56 translatable along a given axis, a planetary gear reduction system 174, disposed between the rotor 112 and the screw mechanism, for driving this mechanism, wherein the rotor (48, 112, 178) carries a plurality of satellite gears 46 of the reduction system. Note figure 7.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rieth et al (US# 6405836).

Rieth et al disclose all the limitations of the instant claims with exception to the explicit disclosure of a metallic toothed portion. Note Rieth et al discloses the use of the toothed rim 37 for sensing with a hall or magnetoresistive element. Column 6, lines 48-53. The examiner takes official notice that metallic material is well known in the art and standard practice for toothed wheels of sensor elements. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select metallic material for the toothed rim of Rieth et al as known in the art as a suitable and economic material for providing proper signals in conjunction with the sensors of Rieth.

Regarding claim 7, note figure 3. While not explicitly stated, it is clear from the disclosure as a whole that the annular bracket portion outside of element 46 is part of the sensor mechanism. Also note 2144.01.

Claims 2-6 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shirai et al (US# 6138801) in view of Rieth et al (US# 6405836).

Shirai et al discloses all the limitations of the instant claims with exception to the disclosure of a toothed rotor. Rieth et al discloses a similar braking device and further teaches the use of a toothed rotor portion 37 to allow for a locking device and function or a position sensor for indicating rotor position. It would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize a toothed rotor

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portion in the device of Shirai et al as taught by Rieth et al to allow for a compact locking structure and/or position sensing structure, thereby allowing locking of the device to reduce energy expenditure or allow position sensing to provide accurate control of braking clearances and forces.

Regarding claim 3, Shirai et al and Rieth et al disclose all the limitations of the instant claims with exception to the explicit disclosure of a metallic toothed portion. The examiner takes official notice that metallic material is well known in the art and standard practice for toothed wheels of sensor elements. It would have been obvious to one of ordinary skill in the art at the time the invention was made to select metallic material for the toothed rim of Shirai et al and Rieth et al as known in the art as a suitable and economic material for providing proper signals in conjunction with the sensors taught by Rieth.

Regarding claim 4, note Rieth et al teaches integral tooththing.

Regarding claim 5, Shirai et al discloses a plurality of pins cooperating with planets 46. See figure 7.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. DE 100 21 368 and Gallo.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley T. King whose telephone number is (571) 272-7117. The examiner can normally be reached on 11:00-7:30 M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James McClellan can be reached on (571) 272-6786. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BTK

 12/30/06
BRADLEY KING
PATENT EXAMINER